

DAEC EMERGENCY PLAN	SECTION 'M'
RECOVERY AND RE-ENTRY PLANNING AND POST-ACCIDENT OPERATIONS	Rev. 20 Page 1 of 7

Effective Date:

TECHNICAL REVIEW	
Prepared by: _____	Date: _____
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PROCEDURE APPROVAL	
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## **1.0 PURPOSE**

- (1) This section describes the framework for use in planning and performing post-accident recovery and re-entry operations and for the return of the DAEC to normal operation.
- (2) The Nuclear Management Company (NMC) is assigned operational responsibility for the DAEC. However, IES maintains corporate accountability for activities at the DAEC and will participate when necessary in activities at the DAEC. The reference "IES/NMC" will be used throughout this procedure to signify this relationship. Further details regarding this relationship can be found in the "Nuclear Power Plant Operating Services Agreement" (NPPOSA) between IES and the NMC.

## **2.0 REQUIREMENTS**

### **2.1 RECOVERY, RE-ENTRY, AND POST-ACCIDENT OPERATIONS PLANNING**

- (1) The operations involved to return the plant to an operable status are divided into three phases:
  - (A) Phase 1 - Accident Response and Recovery
    - (i) This phase includes the immediate actions taken by the emergency response organization discussed in Section B to mitigate the consequences of the accident, to implement the Emergency Response Organization with all of its support functions, both onsite and offsite, and to place the plant in a safe, stable condition.
  - (B) Phase 2 - Re-entry/Assessment
    - (i) This phase commences when the plant is in a safe, stable condition and no further unplanned radioactive releases to the environs are expected. This phase may include the following activities:

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- (a) Re-entering the plant or plant areas to determine the extent of damage, to measure radiation and contamination levels, and to determine access routes to and from the affected area.
- (b) Assessing all data gathered from re-entry operations and additional information developed by the various technical support groups.
- (c) Developing a plan of action for returning the plant to a condition within Technical Specification limits. This may include developing detailed schedules, requesting additional specialized equipment and personnel, writing specific recovery procedures for decontamination, processing highly radioactive water, repairing equipment, and purchasing new equipment.
  - Offsite actions during this phase may entail developing detailed surveys and mapping of contaminated areas, developing decontamination procedures and, in general, preparing the area for a deliberate return of evacuated personnel. These activities will be controlled by the respective county emergency response organizations. IES/NMC support for such activities will be as requested by county and state officials.

(C) Phase 3 - Repair/Return to Operations

- (i) This phase commences upon the completion of all Phase Two preparations and continues until the plant is returned to normal operation within the limits of the Technical Specifications.
- (2) During Phases One and Two, the Emergency Response Organization will expand as dictated by the extent of accident damage under the direction of the Emergency Coordinator initially, then the ER&RD. Additional support personnel may be required in order to function effectively in the areas of scheduling, procedure development, waste processing and disposal, logistics, etc. Organizational expansion of the recovery organization may include A/E (architect/engineer), NSSS (Nuclear Steam Supply System), and consultant assistance as may be required.
  - (3) During all phases, activities will be controlled in accordance with the DAEC Emergency Plan, and EIPs.

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## 2.2 RECOVERY ORGANIZATION

- (1) All recovery operations necessary to restore the DAEC to an operational condition will be conducted within the framework of the Emergency Response Organization. The Emergency Response Organization, as depicted in Figure B-1, page 2, and under the direction of the ER&RD, is responsible for all IES/NMC recovery actions. The Radiological and EOF Manager may provide support as requested by county and state officials to assist in recovery actions offsite. The Emergency Coordinator will be responsible for all recovery actions at the DAEC. The Technical and Engineering Supervisor will be responsible for coordinating all engineering and design activities to support recovery and re-entry at the DAEC.
- (2) Specific recovery tasks, and the sequence in which they are performed will be initiated at the direction of the ER&RD. Activities for which the Emergency Response Organization is responsible during the recovery phase include, but are not necessarily limited to, the following lead and support responsibilities which are delineated in Figure B-3.
  - (A) Logistical
    - (i) Conduct planning and scheduling.
    - (ii) Establish a site access and staging area.
    - (iii) Coordinating and managing the recovery organization.
  - (B) Engineering
    - (i) Evaluate damage to plant equipment.
    - (ii) Develop necessary design changes.
    - (iii) Manage site construction and restoration activities.
  - (C) Radiological
    - (i) Control airborne releases.

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- (ii) Manage radiological waste processing.
- (iii) Control personnel dosimetry and records.
- (iv) Manage onsite decontamination and assist, as necessary, with offsite decontamination.
- (v) Study long-term radiological effects.
- (D) Administrative
  - (i) Provide records management controls.
  - (ii) Process legal and insurance claims.
  - (iii) Manage contracts and control budgets.
  - (iv) Coordinate preparation of NRC and regulatory summaries and reports.
- (3) Re-entry into contaminated areas will be accomplished within the radiation protection requirements contained in 10CFR20. Whenever possible, existing standard radiological protection procedures will be followed using EPA guides.

## 2.3 POPULATION EXPOSURE

- (1) DAEC has positioned environmental TLDs at the site boundary and at various distances from the plant. The number of TLDs and their positions is in accordance with the DAEC Technical Specifications and is shown in Table H-2.
- (2) In conjunction with IES/NMC environmental monitoring efforts, additional environmental monitoring, sampling, and analysis efforts will be conducted by state and federal agency personnel. These efforts will be coordinated by the Radiological and EOF Manager in conjunction with local, state and federal agency representatives. Services of individuals with extensive knowledge and expertise in the field of radiological health will be obtained based upon the severity of the event and potential consequences to the population at risk, to assist in evaluating the projected radiological consequences and in periodically

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estimating total population exposure. These efforts are further discussed in the EIPs.

- (3) The method used to periodically estimate the total population exposure will be based on the type of release, the length of the release, dose projection calculations, offsite monitoring and environmental sampling results, and the length of exposure to and estimated size of the population at risk.
  - (A) Immersion dose, ground dose, and direct exposure dose effects will be estimated using the dose projection calculations. Initial determinations of exposures will be based upon dose projection calculations and field monitoring team survey results. Ingestion, drinking, and milk pathway effects, as well as additional direct plume contamination exposure effects, will be determined from environmental sampling. The Radiological and EOF Manager will ensure that the results are disseminated to the appropriate offsite agencies once the EOF is activated. Procedures will be provided to enable assessment of the total population exposure based upon the results of the long term environmental monitoring and sampling program which is instituted.